# Structural Principles For Internet Governance

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## *Background*

This note builds on a paper that I presented in February 2004 to the ITU's "Workshop on Internet Governance" - See *Deconstructing Internet Governance*[2]

## *What Is The Internet And What Parts Need To Be Governed?*

We are guilty of fuzzy thinking.

Rarely have we ever defined what we mean by the "internet" much less what it means to "govern" it.

In my final report to ICANN[3] I suggested this definition of the internet:

> *The internet is the open system that carries IP packets from source IP addresses to destination IP addresses.*

I see no reason why this definition is not still appropriate.

This definition is important – it focuses our concern on the thing that has made the internet so powerful: that the internet is a system that moves IP packets between any pair of end-points and is largely blind both to the contents of those packets and to the applications and users that are generating and consuming those packets.

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2 *Deconstructing Internet Governance – http://www.cavebear.com/rw/deconstructing-internet-governance-ITU-Feb26-27-2004.htm*

3 My final report to ICANN is available online at http://www.cavebear.com/rw/senate-july-31-2003.htm. The referenced material is found towards the end of that document.

I go further and define *stability of the internet*:

> *The internet is stable when packets are carried from source IP address to destination IP address with dispatch and reasonable reliability, and without restriction or delay unjustified by specific articulated technical needs.*

This definition may be extended to the domain name system:

> *The upper tier of the domain name system is stable when at the root level properly formed and addressed domain name query packets are answered accurately, quickly, and without prejudice for or against any query source.*

The internet is in grave danger from those who wish to make it a specialized transport that will discriminate on the basis of content, application, and user.

A major goal of internet governance should be to preserve the non-discriminatory aspects of the net – what we call the "End to End" principle. This does not mean that users and application providers get a free ride. Rather it means that the user and provider pay for bits and packets without that price being affected by what those bits and packets are being used for.

The present direction of internet governance has been to ignore the end-to-end principle[4] at the IP layer and, instead, to focus on much higher level abstractions – such as trademarks in domain names and unsolicited commercial e-mail.

While those may be useful endeavors, they are matters for other forums and future days. For example, the legal systems of the world provides a well formed, although perhaps slow and expensive, method for the protection of trademarks. Do we need to spend our time building a new trademark protection system when so many other matters on the internet remain undiscussed and unresolved?

Using the definition of the internet that I have provided above, what are appropriate matters of internet governance?

## Technical Stability

There is not much value in the internet if it does not work.[5]

The first priority of internet governance is to assure – not guarantee – that the internet operates.

Operation of the internet is distributed among multiple actors. These actors are not presently obligated to engage in practices conducive to reliability. Nor are they are obligated to have recovery procedures or assets that can be drawn upon to facilitate recovery.

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4 [2] Saltzer, Reed, Clark, "End-to-End Arguments in System Design", 1981 available online at http://www.reed.com/Papers/EndtoEnd.html

5 See my presentation From Barnstorming to Boeing - Transforming the Internet Into a Lifeline Utility (Powerpoint at http://www.cavebear.com/rw/Barnstorming-to-Boeing.ppt) (Speakers notes – Acrobat – at http://www.cavebear.com/rw/Barnstorming-to-Boeing.pdf)

Everyone seems to believe that someone else is going to ensure that nothing bad happens to the net. This is a situation ripe for natural or technical disaster, or human attack.

(Nor are they are infrastructure operators precluded from using their positions to invade the end-to-end principle for purposes of profit or competitive advantage. But that is a matter outside the scope of this paper.)

Another way of describing the present situation is by way of analogy: There is no fire department for the internet – there is no agency that obligates those who provide necessary infrastructure services to meet performance and recovery standards and to refrain from destructive or predatory practices.

For example, there is a common belief that ICANN assures that the upper tiers of the internet's Domain Name System (DNS) will transform DNS queries into DNS responses with dispatch, accuracy, without prejudice, and without data mining.

That belief is without basis and is false.

Because the internet is becoming a system that directly affects the lives of people and the success of organizations the most important task before this meeting of the Internet Governance Forum is to begin building institutions to ensure that the technical services of the internet are subject to technical oversight to assure (but not guarantee) dependable service..

## *Structural Principles*

I am not going to enumerate a detailed list of tasks to be performed – for that one may consult my prior paper *Deconstructing Internet Governance*[6].

However, for convenience here is a quick summary of aspects of the internet that require governance:

- The IP address allocation system must be manged so that that it meshes well with the IP packet routing systems
- The system of inter-carrier/inter-ISP routing and traffic exchange must be managed so that providers can retain flexibility and rich, but flexible interconnection options, while end users can obtain usable assurances (not guarantees, and perhaps for a fee) not merely that packets can actually flow between senders and receivers but also that designated traffic flows will achieve specified levels of service.
- The largely clerical system to allocate protocol numbers and other similar identifiers must be maintained.
- Governance is required to guarantee the responsible and accountable operation of the upper layers of the DNS hierarchy including oversight, on behalf of the community of internet users, of a suite of Domain Name System (DNS) root servers.

6 *Deconstructing Internet Governance* – *http://www.cavebear.com/rw/deconstructing-internet-governance-ITU-Feb26-27-2004.htm*

- As long as the internet is dominated by a single root zone file, then the preparation and dissemination of that root zone file must be managed.

What I would like to quickly discuss is something different than the "what" of internet governance; I'd like to discuss the "how".

In particular I'm concerned with the issue of how do we keep institutions of internet governance from becoming something different than what we intend.

We need to build limits into institutions of internet governance so that they do not grow into the kind of engorged, captured, expensive, and stagnant bureaucracies with which we are all too familiar.

(One has only to look at ICANN to perceive how far an institution of internet governance can grow – like a cancer – from a job done by one man working part-time doing a needed job, into an expensive and immobile labyrinth of committees, contracts, and rules all working on jobs that have nothing to do with the technical stability of the internet.)

## Form Follows Function

We should endeavor to build institutions of internet governance that are shaped around the job they are to perform.

There should be little or no wiggle room for our new institutions to expand or shift. A body that has a technical task should not be permitted to stretch that task, as ICANN has done, so that it reaches its hands into other areas, and possibly, as ICANN has also done, abandoning the job that it was actually intended to do.

There should be no ambiguity about the legal foundations and structure – we have observed, again using ICANN as our model, of how even a little leeway allows an institution of internet governance to redefine itself into something unintended by its founders.

## Build Many Small Bodies of Internet Governance, Not A Few Large Ones

As I discussed in my previous paper, *Deconstructing Internet Governance*[7], the foreseeable tasks of internet governance, are often small, clerical, non-discretionary, and non-controversial.

It is best that each of these tasks be handled by its own separate body of governance.

Some might argue that economies of scale will be achieved by consolidation into a larger, multi-purpose body. That is dangerous.

We have observed how an institution of governance (ICANN) that has several roles can manipulate its performance of these roles to accumulate greater authority and power.

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7 *Deconstructing Internet Governance* – *http://www.cavebear.com/rw/deconstructing-internet-governance-ITU-Feb26-27-2004.htm*

In the long term, several small bodies will cost less than one ever-ramifying larger body.

## Built-in Weakness (Division of Authority)

Internet governance is like any other form of governance – it represents a delegation of authority to the body of governance. Our concern is that this authority not be abused.

Keeping bodies of governance small and tightly confined, as discussed above, are two useful methods of limiting the possibility of abuse.

But some institutions of internet governance will necessarily be formed to handle larger, discretionary, and controversial tasks. For these we need to look back upon the methods used to constrain national governments: division of authority.

## Sunset Provisions

It is a lesson of long experience with governance that actions once taken are hard to retract; sound decisions that have outlived their usefulness and choices that, in hindsight, were errors tend to have an incomprehensible longevity.

Sunset provisions are expiration dates that are built into decisions that require the decision to be periodically re-confirmed else it simply expires and vanishes.

For example, ICANN's UDRP (domain name dispute policy) could have been created so that it had to be re-affirmed every few years else it would simply go away.

Such sunset provisions are a useful way to prune away the old growth that accumulates around bodies of governance.

There are two ways that sunset provisions are useful for internet governance:

First, the internet governance bodies themselves ought to expire unless re-affirmed.

Second, all actions of such bodies ought to expire after some number of years (5?) even if the body does not explicitly attach a sunset provision to an action it takes.

## Clear Standards of Performance and Firm Accountability

The last few years have demonstrated how easy it is for an organization to become opaque and unaccountable; we have seen huge corporate excesses occur because accountability was considered to be nothing more than a pretty word.

There is no accountability unless there is something or someone who is able to hold the institution of internet governance to account for its actions and inactions.

For that reason it is necessary to clearly articulate that the community of internet users are the intended beneficiary of internet governance and that, ultimately, they must have the ability to hold each

institution of internet governance to account, even to the degree of dismantling or replacing it.

Mechanically this is best done by recognizing that the present conception of *stakeholderism* is deeply flawed and that internet governance must be structured around the principle of democracy (direct or representative.) For a discussion of this point, see my companion paper *Stakeholderism – The Wrong Road For Internet Governance*[8]

## First Law of the Internet

I have found the following to be a useful principle in all matters of internet governance:

***The First Law of the Internet***

*Every person shall be free to use the Internet in any way that is privately beneficial without being publicly detrimental.*

- *The burden of demonstrating public detriment shall be on those who wish to prevent the private use.*
    - *Such a demonstration shall require clear and convincing evidence of public detriment.*
- *The public detriment must be of such degree and extent as to justify the suppression of the private activity*

8 *Stakeholderism* - The Wrong Road For Internet Governance – online at http://www.cavebear.com/rw/igf-democracy-in-internet-governance.pdf (5 pages)